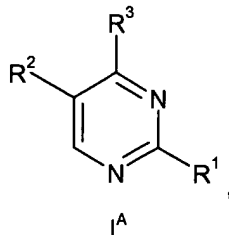


- Amendments to the Claims -

1. - 164. (Canceled)

165. (Currently amended) A compound of the formula I^A,



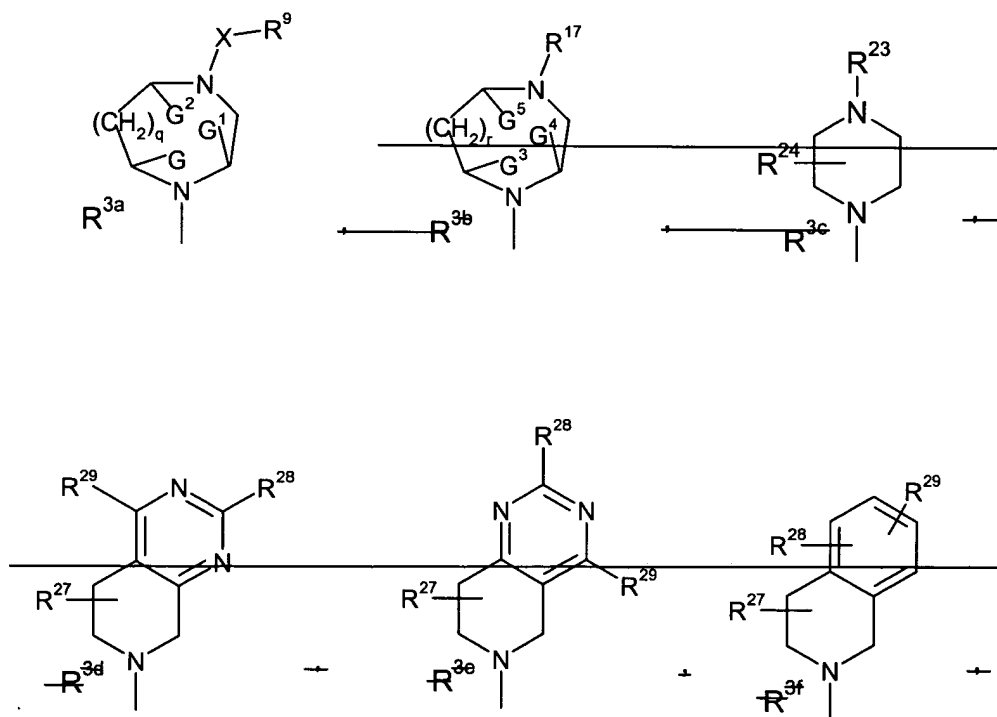
wherein:

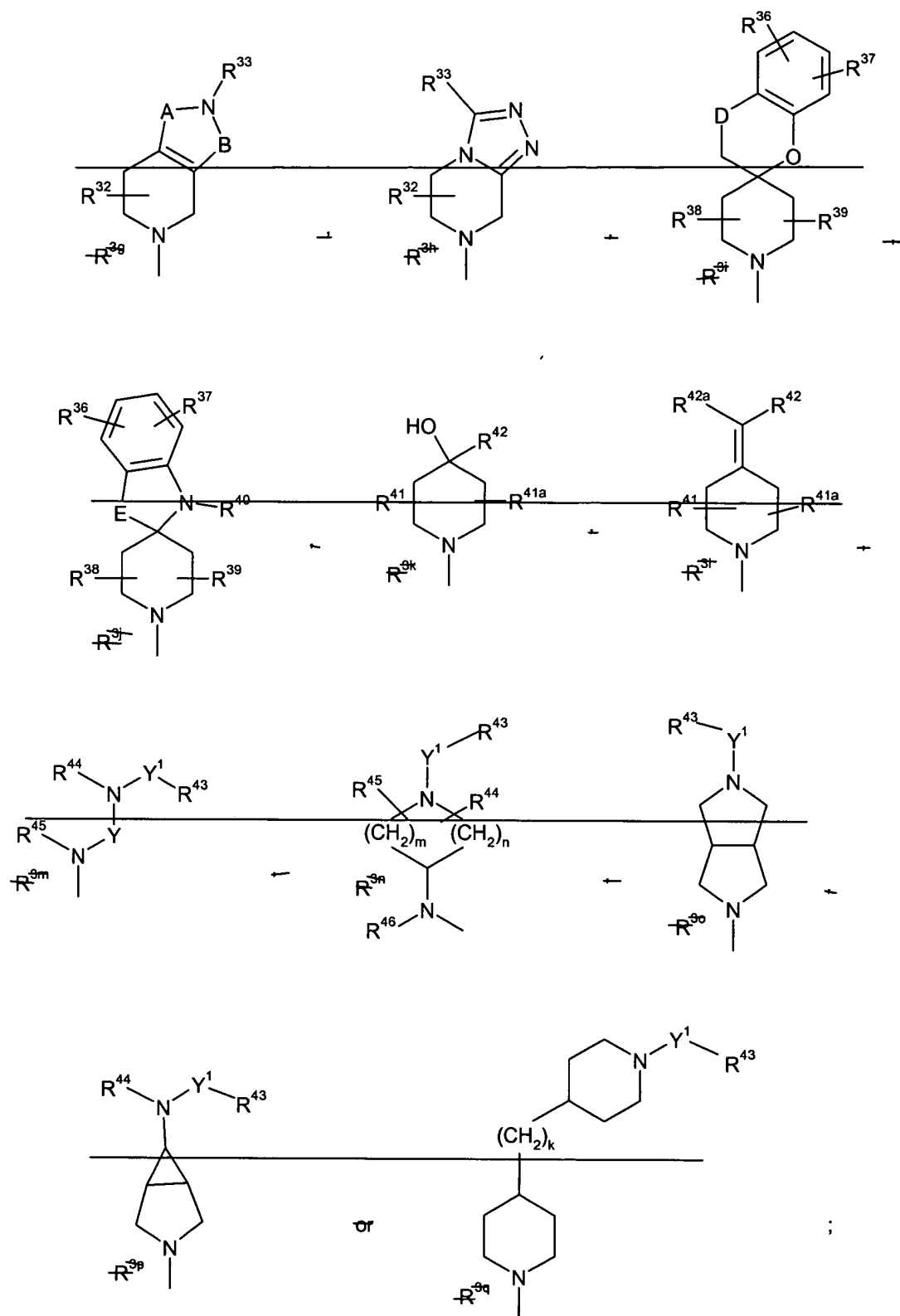
R¹ is C-(OR⁸⁰)R⁴R⁵, where R⁸⁰ is independently (C₁-C₄)alkyl, benzyl, (C₁-C₆)alkylcarbonyl or phenylcarbonyl, where said benzyl and said phenyl are optionally substituted with up to three (C₁-C₄)alkyl, (C₁-C₄)alkoxy, halo or nitro;

R⁴ and R⁵ are each independently hydrogen, methyl, ethyl or hydroxy-(C₁-C₃)alkyl;

R² is hydrogen, (C₁-C₄)alkyl or (C₁-C₄)alkoxy;

R³ is a radical of the formula





wherein said radical of formula R^{3a} is substituted by R⁶, R⁷ and R⁸;
 said radical of formula R^{3b} is substituted by R¹⁸, R¹⁹ and R²⁰;

G, G¹ and G² are taken separately and are each hydrogen and R⁶ is hydrogen, (C₁-C₄)alkyl, (C₁-C₄)alkoxycarbonyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, hydroxy-(C₁-C₄)alkyl or phenyl optionally independently substituted with up to three hydroxy, halo, hydroxy-(C₁-C₄)alkyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, (C₁-C₄)alkyl or (C₁-C₄)alkoxy, wherein said (C₁-C₄)alkyl in the definition of R⁶ and said (C₁-C₄)alkoxy in the definition of R⁶ are optionally and independently substituted with up to five fluoro; R⁷ and R⁸ are each independently hydrogen or (C₁-C₄)alkyl; or
 G and G¹ are taken together and are (C₁-C₃)alkylene and R⁶, R⁷, R⁸ and G² are hydrogen; or
 G¹ and G² are taken together and are (C₁-C₃)alkylene and R⁶, R⁷, R⁸ and G are hydrogen;
 q is 0 or 1;

X is a covalent bond, -(C=NR¹⁰)-, oxycarbonyl, vinylenylcarbonyl, oxy(C₁-C₄)alkylenylcarbonyl, (C₁-C₄)alkylenylcarbonyl, (C₃-C₄)alkenylcarbonyl, thio(C₁-C₄)alkylenylcarbonyl, vinylenylsulfonyl, sulfinyl-(C₁-C₄)alkylenylcarbonyl, sulfonyl-(C₁-C₄)alkylenylcarbonyl or carbonyl(C₀-C₄)alkylenylcarbonyl; wherein said oxy(C₁-C₄)alkylenylcarbonyl, (C₁-C₄)alkylenylcarbonyl, (C₃-C₄)alkenylcarbonyl and thio(C₁-C₄)alkylenylcarbonyl in the definition of X are each optionally and independently substituted with up to two (C₁-C₄)alkyl, benzyl or Ar; said vinylenylsulfonyl and said vinylenylcarbonyl in the definition of X are optionally substituted independently on one or two vinylenyl carbons with (C₁-C₄)alkyl, benzyl or Ar; and said carbonyl(C₀-C₄)alkylenylcarbonyl in the definition of X is optionally substituted independently with up to three (C₁-C₄)alkyl, benzyl or Ar;
 R¹⁰ is hydrogen or (C₁-C₄)alkyl;

R⁹ is (C₃-C₇)cycloalkyl, Ar¹-(C₀-C₃)alkylenyl or (C₁-C₆)alkyl optionally substituted with up to five fluoro; provided that when q = 0 and X is a covalent bond, oxycarbonyl or (C₁-C₄)alkylenylcarbonyl, then R⁹ is not (C₁-C₆)alkyl;

Ar and Ar¹ are phenyl, naphthyl, pyridyl, pyrimidyl, pyrazinyl, pyridazinyl, triazinyl, quinolyl, isoquinolyl, quinazolyl, quinoxalyl, phthalazinyl, cinnolyl, naphthyridinyl, pteridinyl, pyrazinopyrazinyl, pyrazinopyridazinyl, pyrimidopyridazinyl, pyrimidopyrimidyl, pyridopyrimidyl, pyridopyrazinyl, pyridopyridazinyl, pyrrolyl, furanyl, thienyl, imidazolyl, oxazolyl, thiazolyl, pyrazolyl, isoxazolyl, isothiazolyl, triazolyl, oxadiazolyl, thiadiazolyl, tetrazolyl, indolyl, benzofuranyl, benzothieryl, benzimidazolyl, benzoxazolyl, benzothiazolyl, indazolyl, benzisoxazolyl, benzisothiazolyl, pyrrolopyridyl, furopyridyl, thienopyridyl, imidazolopyridyl, oxazolopyridyl, thiazolopyridyl, pyrazolopyridyl, isoxazolopyridyl, isothiazolopyridyl, pyrrolopyrimidyl, furopyrimidyl, thienopyrimidyl, imidazolopyrimidyl, oxazolopyrimidyl, thiazolopyrimidyl, pyrazolopyrimidyl, isoxazolopyrimidyl, isothiazolopyrimidyl, pyrrolopyrazinyl, furopyrazinyl, thienopyrazinyl, imidazolopyrazinyl, oxazolopyrazinyl, thiazolopyrazinyl, pyrazolopyrazinyl, isoxazolopyrazinyl, isothiazolopyrazinyl, pyrrolopyridazinyl, furopyridazinyl, thienopyridazinyl, imidazolopyridazinyl, oxazolopyridazinyl, thiazolopyridazinyl, pyrazolopyridazinyl, isoxazolopyridazinyl or isothiazolopyridazinyl

~~independently a fully saturated, partially saturated or fully unsaturated five to eight-membered ring optionally having up to four heteroatoms selected independently from oxygen, sulfur and nitrogen, or a bicyclic ring consisting of two fused independently partially saturated, fully saturated or fully unsaturated five to seven membered rings, taken independently, optionally having up to four heteroatoms selected independently from nitrogen, sulfur and oxygen, or a~~

~~tricyclic ring consisting of three fused independently partially saturated, fully saturated or fully unsaturated five to seven membered rings, taken independently, optionally having up to four heteroatoms selected independently from nitrogen, sulfur and oxygen, said partially saturated, fully saturated ring or fully unsaturated monocyclic ring, bicyclic ring or tricyclic ring optionally having one or two oxo groups substituted on carbon or one or two oxo groups substituted on sulfur;~~

Ar and Ar¹ are optionally independently substituted on carbon or nitrogen, on one ring if the moiety is monocyclic, on one or both rings if the moiety is bicyclic, or on one, two or three rings if the moiety is tricyclic, with up to a total of four substituents independently selected from R¹¹, R¹², R¹³ and R¹⁴; wherein R¹¹, R¹², R¹³ and R¹⁴ are each taken separately and are each independently halo, formyl, (C₁-C₆)alkoxycarbonyl, (C₁-C₆)alkylenyloxycarbonyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, C(OH)R¹⁵R¹⁶, naphthyl, phenyl, imidazolyl, pyridyl, triazolyl, morpholinyl, (C₀-C₄)alkylsulfamoyl, N-(C₀-C₄)alkylcarbamoyl, N,N-di-(C₁-C₄)alkylcarbamoyl, N-phenylcarbamoyl, N-(C₁-C₄)alkyl-N-phenylcarbamoyl, N,N-diphenyl carbamoyl, (C₁-C₄)alkylcarbonylamido, (C₃-C₇)cycloalkylcarbonylamido, phenylcarbonylamido, piperidinyl, pyrrolidinyl, piperazinyl, cyano, benzimidazolyl, amino, anilino, pyrimidyl, oxazolyl, isoxazolyl, tetrazolyl, thienyl, thiazolyl, benzothiazolyl, pyrrolyl, pyrazolyl, tetrahydroquinolyl, tetrahydroisoquinolyl, benzoxazolyl, pyridazinyl, pyridyloxy, pyridylsulfanyl, furanyl, 8-(C₁-C₄)alkyl-3,8-diaza[3.2.1]bicyclooctyl, 3,5-dioxo-1,2,4-triazinyl, phenoxy, thiophenoxy, (C₁-C₄)alkylsulfanyl, (C₁-C₄)alkylsulfonyl, (C₃-C₇)cycloalkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro or (C₁-C₄)alkoxy optionally substituted with up to five fluoro; said naphthyl, phenyl, pyridyl, piperidinyl, benzimidazolyl, pyrimidyl, thienyl, benzothiazolyl, pyrrolyl, tetrahydroquinolyl, tetrahydroisoquinolyl, benzoxazolyl, pyridazinyl, pyridyloxy, pyridylsulfanyl, furanyl, thiophenoxy, anilino and phenoxy in the definition of R¹¹, R¹², R¹³ and R¹⁴ are optionally substituted with up to three substituents independently selected from hydroxy, halo, hydroxy-(C₁-C₄)alkyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro and (C₁-C₄)alkoxy optionally substituted with up to five fluoro; said imidazolyl, oxazolyl, isoxazolyl, thiazolyl and pyrazolyl in the definition of R¹¹, R¹², R¹³ and R¹⁴ are optionally substituted with up to two substituents independently selected from hydroxy, halo, hydroxy-(C₁-C₄)alkyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro and (C₁-C₄)alkoxy optionally substituted with up to five fluoro; said morpholinyl in the definition of R¹¹, R¹², R¹³ and R¹⁴ is optionally substituted with up to two substituents independently selected from (C₁-C₄)alkyl; said pyrrolidinyl in the definition of R¹¹, R¹², R¹³ and R¹⁴ is optionally substituted with up to two substituents independently selected from hydroxy, hydroxy-(C₁-C₃)alkyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro and (C₁-C₄)alkoxy optionally substituted with up to five fluoro; said piperazinyl in the definition of R¹¹, R¹², R¹³ and R¹⁴ is optionally substituted with up to three substituents independently selected from (C₁-C₄)alkoxy-(C₁-C₄)alkyl, hydroxy-(C₁-C₃)alkyl, phenyl, pyridyl, (C₀-C₄)alkylsulfamoyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro and (C₁-C₄)alkoxy optionally substituted with up to five fluoro; said triazolyl in the definition of R¹¹, R¹², R¹³ and R¹⁴ is optionally substituted with hydroxy, halo, hydroxy-(C₁-C₄)alkyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro and (C₁-C₄)alkoxy optionally substituted with

up to five fluoro; said tetrazolyl in the definition of R¹¹, R¹², R¹³ and R¹⁴ is optionally substituted with hydroxy-(C₂-C₃)alkyl or (C₁-C₄)alkyl optionally substituted with up to five fluoro; and said phenyl and pyridyl which are optionally substituted on piperazine in the definition of R¹¹, R¹², R¹³ and R¹⁴ are optionally substituted with up to three hydroxy, halo, hydroxy-(C₁-C₄)alkyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro and (C₁-C₄)alkoxy optionally substituted with up to five fluoro; or

R¹¹ and R¹² are taken together on adjacent carbon atoms and are

-CH₂OC(CH₃)₂OCH₂- or -O-(CH₂)_p-O-, and R¹³ and R¹⁴ are taken separately and are each independently hydrogen or (C₁-C₄)alkyl;

p is 1, 2 or 3; and

R¹⁵ and R¹⁶ are taken separately and are each independently hydrogen, (C₁-C₄)alkyl optionally substituted with up to five fluoro; or R¹⁵ and R¹⁶ are taken separately and R¹⁵ is hydrogen and R¹⁶ is (C₃-C₆)cycloalkyl, hydroxy-(C₁-C₃)alkyl, phenyl, pyridyl, pyrimidyl, thienyl, furanyl, thiazolyl, oxazolyl, imidazolyl, benzothiazolyl or benzoxazolyl; or R¹⁵ and R¹⁶ are taken together and are (C₃-C₆)alkylene [[:]]

G³, G⁴ and G⁵ are taken separately and are each hydrogen; r is 0; R¹⁸ is hydrogen, (C₄-C₄)alkyl, (C₄-C₄)alkoxycarbonyl, (C₄-C₄)alkoxy-(C₄-C₄)alkyl, hydroxy-(C₄-C₄)alkyl or phenyl optionally independently substituted with up to three hydroxy, halo, hydroxy-(C₄-C₄)alkyl, (C₄-C₄)alkoxy-(C₄-C₄)alkyl, (C₄-C₄)alkyl or (C₄-C₄)alkoxy, wherein said (C₄-C₄)alkyl in the definition of R⁶ and said (C₄-C₄)alkoxy in the definition of R⁶ are optionally and independently substituted with up to five fluoro; and R¹⁹ and R²⁰ are each independently (C₄-C₄)alkyl; or

G³, G⁴ and G⁵ are taken separately and are each hydrogen; r is 1; R¹⁸ is hydrogen, (C₄-C₄)alkyl, (C₄-C₄)alkoxycarbonyl, (C₄-C₄)alkoxy-(C₄-C₄)alkyl, hydroxy-(C₄-C₄)alkyl or phenyl optionally independently substituted with up to three hydroxy, halo, hydroxy-(C₄-C₄)alkyl, (C₄-C₄)alkoxy-(C₄-C₄)alkyl, (C₄-C₄)alkyl or (C₄-C₄)alkoxy, wherein said (C₄-C₄)alkyl in the definition of R⁶ and said (C₄-C₄)alkoxy in the definition of R⁶ are optionally and independently substituted with up to five fluoro; and R¹⁹ and R²⁰ are each independently hydrogen or (C₄-C₄)alkyl; or

G³ and G⁴ are taken together and are (C₄-C₃)alkylene; r is 0 or 1; and R¹⁸, R¹⁹, R²⁰ and G⁵ are hydrogen; or

G⁴ and G⁵ are taken together and are (C₄-C₃)alkylene; r is 0 or 1; and R¹⁸, R¹⁹, R²⁰ and G³ are hydrogen;

R¹⁷ is SO₂NR²¹R²², CONR²¹R²², (C₄-C₆)alkoxycarbonyl, (C₄-C₆)alkylcarbonyl, Ar²-carbonyl, (C₄-C₆)alkylsulfonyl, (C₄-C₆)alkylsulfinyl, Ar²-sulfonyl, Ar²-sulfinyl and (C₄-C₆)alkyl;

R²¹ and R²² are taken separately and are each independently selected from hydrogen, (C₄-C₆)alkyl, (C₃-C₇)cycloalkyl and Ar²-(C₀-C₄)alkylenyl; or

R²¹ and R²² are taken together with the nitrogen atom to which they are attached to form azetidiny, pyrrolidinyl, piperidinyl, piperazinyl, morpholinyl, azepinyl, azabicyclo[3.2.2]nonanyl, azabicyclo[2.2.1]heptyl, 6,7-dihydro-5H-dibenzo[c,e]azepinyl, 1,2,3,4-tetrahydro-isoquinolyl or 5,6,7,8-tetrahydropyrido[4,3-d]pyrimidyl; said azetidiny in the definition of R²¹ and R²² is optionally substituted independently with one substituent selected from hydroxy, amino, hydroxy-(C₄-C₄)alkyl, (C₄-C₄)alkoxy-(C₄-C₄)alkyl, (C₄-C₄)alkyl optionally substituted with up to five fluoro

and (C₁-C₄)alkoxy optionally substituted with up to five fluoro; said pyrrolidinyl, piperidinyl, azepinyl in the definition of R²¹ and R²² are optionally substituted independently with up to two substituents independently selected from hydroxy, amino, hydroxy-(C₁-C₄)alkyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro and (C₁-C₄)alkoxy optionally substituted with up to five fluoro; said morpholinyl in the definition of R²¹ and R²² is optionally substituted with up to two substituents independently selected from hydroxy-(C₁-C₄)alkyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro and (C₁-C₄)alkoxy optionally substituted with up to five fluoro; said piperazinyl in the definition of R²¹ and R²² is optionally substituted independently with up to three substituents independently selected from phenyl, pyridyl, pyrimidyl, (C₁-C₄)alkoxycarbonyl and (C₁-C₄)alkyl optionally substituted with up to five fluoro; said 1,2,3,4-tetrahydro-isoquinolyl and said 5,6,7,8-tetrahydropyrido[4,3-d]pyrimidyl in the definition of R²¹ and R²² are optionally substituted independently with up to three substituents independently selected from hydroxy, amino, halo, hydroxy-(C₁-C₄)alkyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro and (C₁-C₄)alkoxy optionally substituted with up to five fluoro; and said 6,7-dihydro-5H-dibenzo[c,e]azepinyl in the definition of R²¹ and R²² is optionally substituted with up to four substituents independently selected from hydroxy, amino, halo, hydroxy-(C₁-C₄)alkyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro and (C₁-C₄)alkoxy optionally substituted with up to five fluoro; said pyrimidyl, pyridyl and phenyl which are optionally substituted on said piperazine in the definition of R²¹ and R²² is optionally substituted with up to three substituents selected from hydroxy, amino, hydroxy-(C₁-C₄)alkyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro and (C₁-C₄)alkoxy optionally substituted with up to five fluoro; Ar² is independently defined as set forth for Ar and Ar¹ above; said Ar² is optionally independently substituted as set forth for Ar and Ar¹ above; R²³ is CONR²⁶R²⁶ or SO₂R²⁶R²⁶, wherein R²⁵ is hydrogen (C₁-C₄)alkyl or Ar³-(C₀-C₄)alkylenyl and R²⁶ is Ar³-(C₀-C₄)alkylenyl; provided that when Ar³ is phenyl, naphthyl or biphenyl, then R²³ cannot be CONR²⁶R²⁶ where R²⁶ is hydrogen or Ar³ and R²⁶ is Ar³; R²⁴ is hydrogen, (C₁-C₄)alkyl, (C₁-C₄)alkoxycarbonyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, hydroxy-(C₁-C₄)alkyl or phenyl optionally independently substituted with up to three hydroxy, halo, hydroxy-(C₁-C₄)alkyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, (C₁-C₄)alkyl or (C₁-C₄)alkoxy, wherein said (C₁-C₄)alkyl in the definition of R⁶ and said (C₁-C₄)alkoxy in the definition of R⁶ are optionally and independently substituted with up to five fluoro; Ar³ is independently defined as set forth for Ar and Ar¹ above; said Ar³ is optionally independently substituted as set forth for Ar and Ar¹ above; R²⁷ is hydrogen or (C₁-C₄)alkyl; R²⁸ and R²⁹ are each independently hydrogen, hydroxy, halo, hydroxy-(C₁-C₄)alkyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro, (C₁-C₄)alkoxy optionally substituted with up to five fluoro, phenyl, pyridyl, pyrimidyl, thienyl, furanyl, thiazolyl, oxazolyl, phenoxy, thiophenoxy, SO₂NR³⁰R³⁴, CONR³⁰R³⁴ or NR³⁰R³⁴; said thienyl, pyrimidyl, furanyl, thiazolyl and oxazolyl in the definition of R²⁸ and R²⁹ are optionally substituted by up to two hydroxy, halo, hydroxy-(C₁-C₄)alkyl, (C₁-C₄)alkoxy-(C₁-C₄)alkyl, (C₁-C₄)alkyl optionally

substituted with up to five fluoro or (C₁-C₄)alkoxy optionally substituted with up to five fluoro; said phenyl, pyridyl, phenoxy and thiophenoxy in the definition of R²⁸ and R²⁹ are optionally substituted by up to three hydroxy, halo, hydroxy (C₁-C₄)alkyl, (C₁-C₄)alkoxy (C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro or (C₁-C₄)alkoxy optionally substituted with up to five fluoro;

R³⁰ and R³¹ are each independently hydrogen, (C₁-C₄)alkyl, (C₃-C₇)cycloalkyl or phenyl, said phenyl is optionally substituted with up to three hydroxy, halo, hydroxy (C₁-C₄)alkyl, (C₁-C₄)alkoxy (C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro or (C₁-C₄)alkoxy optionally substituted with up to five fluoro; or

R³⁰ and R³¹ are taken together with the nitrogen to which they are attached to form indolyl, pyrrolidinyl, piperidinyl, piperazinyl or morpholyl; said pyrrolidinyl and piperidinyl in the definition of R³⁰ and R³¹ are optionally substituted with up to two hydroxy, amino, hydroxy (C₁-C₄)alkyl, (C₁-C₄)alkoxy (C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro or (C₁-C₄)alkoxy optionally substituted with up to five fluoro; said indolyl and piperazinyl in the definition of R³⁰ and R³¹ are optionally substituted with up to three hydroxy, amino, hydroxy (C₁-C₄)alkyl, (C₁-C₄)alkoxy (C₁-C₄)alkyl, (C₁-C₄)alkoxycarbonyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro or (C₁-C₄)alkoxy optionally substituted with up to five fluoro; said morpholyl in the definition of R³⁰ and R³¹ is optionally substituted with up to two substituents independently selected from hydroxy (C₁-C₄)alkyl, (C₁-C₄)alkoxy (C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro and (C₁-C₄)alkoxy optionally substituted with up to five fluoro;

A is N optionally substituted with hydrogen or (C₁-C₄)alkyl and B is carbonyl; or

A is carbonyl and B is N optionally substituted with hydrogen or (C₁-C₄)alkyl;

R³² is hydrogen or (C₁-C₄)alkyl;

R³³ is phenyl, pyridyl, pyrimidyl, thiazolyl, oxazolyl, benzyl, quinolyl, isoquinolyl, phthalizyl, quinoxanlyl, benzothiazolyl, benzoxazolyl, benzofuranyl or benzothienyl; said phenyl, pyridyl, pyrimidyl, thiazolyl, oxazolyl, benzyl, quinolyl, isoquinolyl, phthalizyl, quinoxanlyl, benzothiazolyl, benzoxazolyl, benzofuranyl and benzothienyl in the definition of R³³ are optionally substituted with up to three phenyl, phenoxy, NR³⁴R³⁵, halo, hydroxy, hydroxy (C₁-C₄)alkyl, (C₁-C₄)alkoxy (C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro or (C₁-C₄)alkoxy optionally substituted with up to five fluoro;

R³⁴ and R³⁵ are each independently hydrogen, (C₁-C₄)alkyl, phenyl or phenylsulfonyl; said phenyl and phenylsulfonyl in the definition of R³⁴ and R³⁵ are optionally substituted with up to three halo, hydroxy, (C₁-C₄)alkyl optionally substituted with up to five fluoro or (C₁-C₄)alkoxy optionally substituted with up to five fluoro;

D is CO, CHOH or CH₂;

E is O, NH or S;

R³⁶ and R³⁷ are taken separately and are each independently hydrogen, halo, cyano, hydroxy, amino, (C₁-C₆)alkylamino, di (C₁-C₆)alkylamino, pyrrolidino, piperidino, morpholino, (C₁-C₄)alkoxy (C₁-C₄)alkyl, hydroxy (C₁-C₄)alkyl, Ar⁴, (C₁-C₄)alkyl optionally substituted with up to five fluoro or (C₁-C₄)alkoxy optionally substituted with up to five fluoro;

R³⁸, R³⁹ and R⁴⁰ are each independently hydrogen or (C₁-C₄)alkyl;

Ar⁴ is phenyl, furanyl, thienyl, pyridyl, pyrimidyl, pyrazinyl or pyridazinyl; said Ar⁴ being optionally substituted with up to three hydroxy, (C₁-C₄)alkoxy, (C₁-C₄)alkyl, halo, hydroxy (C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro or (C₁-C₄)alkoxy optionally substituted with up to five fluoro; or

R³⁶ and R³⁷ are taken together on adjacent carbon atoms and are -O-(CH₂)_t-O-;

t is 1, 2 or 3;

Y is (C₂-C₆)alkylene;

R⁴⁴, R⁴⁵ and R⁴⁶ are each independently hydrogen or (C₁-C₄)alkyl;

m and n are each independently 1, 2 or 3, provided that the sum of m and n is 2, 3 or 4;

k is 0, 1, 2, 3 or 4;

Y¹ is a covalent bond, carbonyl, sulfonyl or oxycarbonyl;

R⁴³ is (C₃-C₇)cycloalkyl, Ar⁵-(C₀-C₄)alkylenyl, NR⁴⁷R⁴⁸ or (C₁-C₆)alkyl optionally substituted with one to five fluoro; provided that when Y¹ is a covalent bond or oxycarbonyl, then R⁴³ is not NR⁴⁷R⁴⁸;

R⁴⁷ and R⁴⁸ are taken separately and are each independently selected from hydrogen, Ar⁵, (C₁-C₆)alkyl and Ar⁵-(C₀-C₄)alkylenyl; or

R⁴⁷ and R⁴⁸ are taken together with the nitrogen atom to which they are attached to form azetidiny, pyrrolidinyl, piperidinyl, piperazinyl, morpholinyl, azepinyl, azabicyclo[3.2.2]nonanyl, azabicyclo[2.2.1]heptyl, 1,2,3,4-tetrahydroisoquinolyl, 6,7-dihydro-5H-dibenzo[c,e]azepinyl or 5,6,7,8-tetrahydropyrido[4,3-d]pyrimidyl; said azetidiny in the definition of R⁴⁷ and R⁴⁸ are optionally substituted with one hydroxy, amino, hydroxy (C₁-C₄)alkyl, (C₁-C₄)alkoxy (C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro or (C₁-C₄)alkoxy optionally substituted with up to five fluoro; said pyrrolidinyl, piperidinyl and azepinyl in the definition of R⁴⁷ and R⁴⁸ are optionally substituted with up to two hydroxy, amino, hydroxy (C₁-C₄)alkyl, (C₁-C₄)alkoxy (C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro or (C₁-C₄)alkoxy optionally substituted with up to five fluoro; said morpholinyl in the definition of R⁴⁷ and R⁴⁸ is optionally substituted with up to two substituents independently selected from hydroxy (C₁-C₄)alkyl, (C₁-C₄)alkoxy (C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro and (C₁-C₄)alkoxy optionally substituted with up to five fluoro; said piperazinyl, 1,2,3,4-tetrahydroisoquinolyl and 5,6,7,8-tetrahydro[4,3-d]pyrimidyl in the definition of R⁴⁷ and R⁴⁸ are optionally substituted with up to three hydroxy, amino, halo, hydroxy (C₁-C₄)alkyl, (C₁-C₄)alkoxy (C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro or (C₁-C₄)alkoxy optionally substituted with up to five fluoro; and said 6,7-dihydro-5H-dibenzo[c,e]azepinyl in the definition of R⁴⁷ and R⁴⁸ are optionally substituted with up to four hydroxy, amino, halo, hydroxy (C₁-C₄)alkyl, (C₁-C₄)alkoxy (C₁-C₄)alkyl, (C₁-C₄)alkyl optionally substituted with up to five fluoro or (C₁-C₄)alkoxy optionally substituted with up to five fluoro;

Ar⁵ is independently defined as set forth for Ar and Ar¹ above;

Ar⁵ is optionally independently substituted as set forth for Ar and Ar¹ above;

R⁴² and R^{42a} are independently hydrogen, (C₃-C₇)cycloalkyl, Ar⁶-(C₀-C₃)alkylenyl, Ar⁶-(C₂-C₄)alkenyl, Ar⁶-carbonyl or (C₁-C₆)alkyl optionally substituted with up to five fluoro;

Ar⁶ is independently defined as set forth for Ar and Ar¹ above;

~~Ar⁶ is optionally independently substituted as set forth for Ar and Ar⁺ above; and R⁴⁴ and R^{44a} are each independently hydrogen or (C₁-C₄)alkyl.~~

166. (Original) A compound of claim 165 selected from 1R-(4-{4-[2-(1R-butyryloxy-ethyl)-pyrimidin-4-yl]-2R,6S-dimethyl-piperazin-1-yl}-pyrimidin-2-yl)-ethyl butyrate; 1R-(4-{4-[2-(1S-butyryloxy-ethyl)-pyrimidin-4-yl]-2R,6S-dimethyl-piperazin-1-yl}-pyrimidin-2-yl)-ethyl butyrate; 1S-(4-{4-[2-(1R-butyryloxy-ethyl)-pyrimidin-4-yl]-2R,6S-dimethyl-piperazin-1-yl}-pyrimidin-2-yl)-ethyl butyrate; (E)-1R-{4-[4-(2-methyl-32-phenyl-acryloyl)-piperazin-1-yl]-pyrimidin-2-yl}-ethyl acetate; (R)-1-[4-(4-quinoxalin-2-yl-piperazin-1-yl)-pyrimidin-2-yl]-ethyl acetate; 1R-(4-{4-[2-(1RS-hydroxy-ethyl)-pyrimidin-4-yl]-2R,6S-dimethyl-piperazin-1-yl}-pyrimidin-2-yl)-ethyl butyrate; 1RS-(4-{4-[2-(1R-hydroxy-ethyl)-pyrimidin-4-yl]-3R,5S-dimethyl-piperazin-1-yl}-pyrimidin-2-yl)-ethyl butyrate; 1R-[4-(3S-methyl-4-oxazolo[5,4-b]pyridin-2-yl-piperazin-1-yl)-pyrimidin-2-yl]-ethyl butyrate; 1R-{4-[3R,5S-dimethyl-4-(4-methyl-6-phenyl-[1,3,5]triazin-2-yl)-piperazin-1-yl]-pyrimidin-2-yl}-ethyl butyrate; 1R-{4-[4-(4-cyclopropyl-[1,3,5]triazin-2-yl)-3R,5S-dimethyl-piperazin-1-yl]-pyrimidin-2-yl}-ethyl butyrate; 1R-{4-[4-(4-cyclopropyl-[1,3,5]triazin-2-yl)-2R,6S-dimethyl-piperazin-1-yl]-pyrimidin-2-yl}-ethyl butyrate; 1R-{4-[4-(4,6-dimethyl-[1,3,5]triazin-2-yl)-2R,6S-dimethyl-piperazin-1-yl]-pyrimidin-2-yl}-ethyl butyrate; 1R-{4-[4-(4-hydroxymethyl-6-phenyl-[1,3,5]triazin-2-yl)-2R,6S-dimethyl-piperazin-1-yl]-pyrimidin-2-yl}-ethyl butyrate; 1R-{4-[4-(4-methoxy-6-methoxymethyl-[1,3,5]triazin-2-yl)-R,6S-dimethyl-piperazin-1-yl]-pyrimidin-2-yl}-ethyl butyrate; and 1R-{4-[2R,6S-dimethyl-4-(4-methyl-[1,3,5]triazin-2-yl)-piperazin-1-yl]-pyrimidin-2-yl}-ethyl butyrate.

167. - 188. (Canceled)